REPORT from the REGIONAL FORESTER

PSW FOREST AND RANGE EXPERIMENT STATION
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Forest Service — U. S. Department of Agriculture

The State of California was badly battered by both fire and flood in 1964. The National Forests – located in the more mountainous areas – received more than a fair share of the damage caused by these disasters.

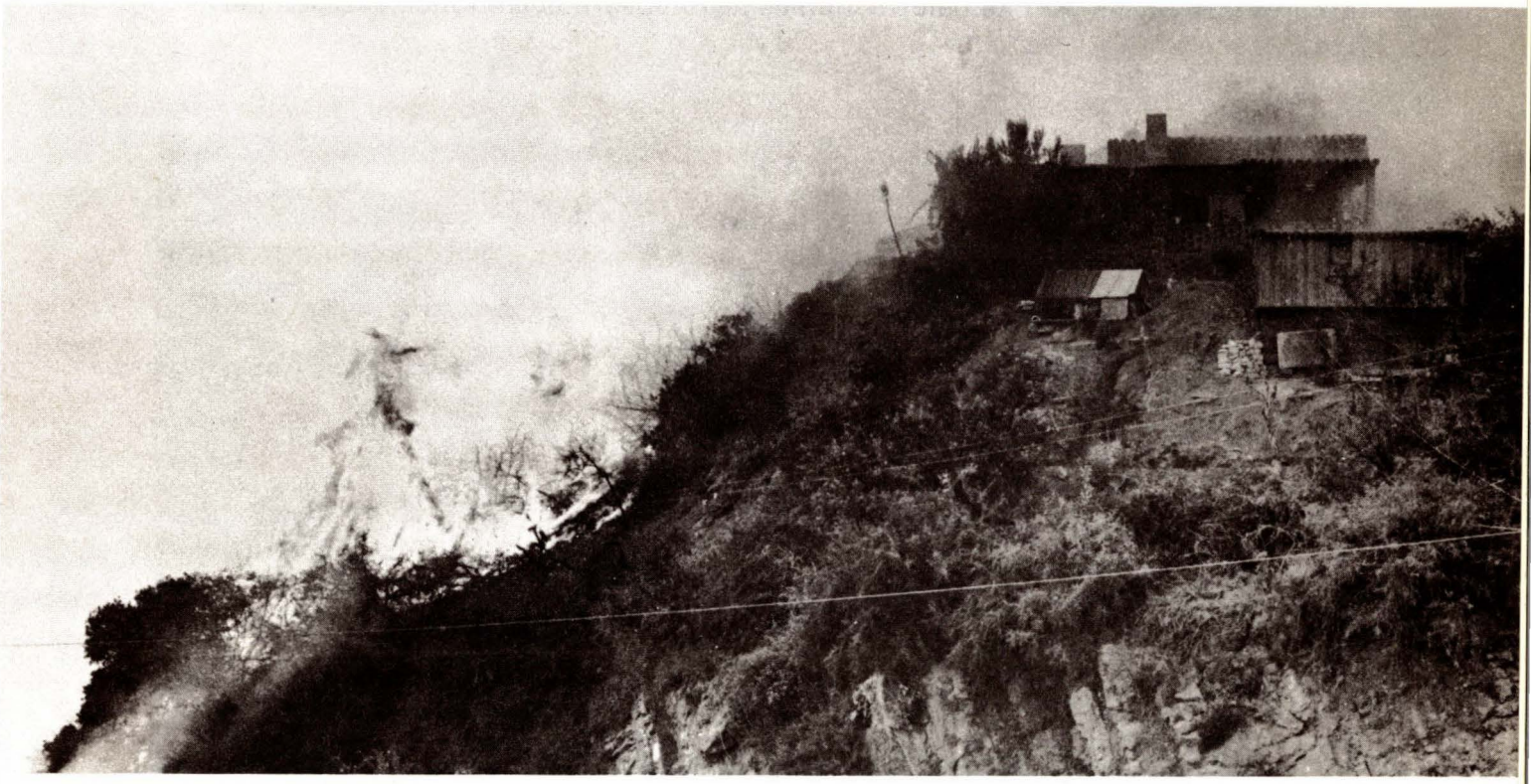
A series of forest fires in southern California included the destructive Coyote Fire near Santa Barbara, while in northern California a disastrous string of fires struck Napa and Sonoma Counties. These, along with other widely-scattered fires, left hundreds homeless, and thousands of acres of watershed lands stripped of soil-holding vegetation and at the mercy of the elements. Rehabilitation of the burned areas was still in progress at Christmas time when torrential rains lashed the northern half of the State. The melting of the accumulated snowpack added to the heavy runoff from the rains.

We have used the Coyote Fire, and subsequent rehabilitation, as an example of the year's work and of the inter-relationship of various projects. This story will point out important phases of management of your National Forests in California. Many of you have a personal interest in these events, and many of you have had a hand in helping with some of them. Without your help and constructive criticism, our job would be a difficult one indeed.

Cover photo: Gibraltar Reservoir before the Coyote Fire

September 22, 1964 started off warm in Santa Barbara. By eleven o'clock, much of the morning haze had been dispersed by a light ocean breeze which carried just enough moisture to form a few clouds behind the city. Inland, beyond the mountains lay the Santa Ynez Watershed, one of the most valuable watersheds in the world, and vital to the inhabitants of Santa Barbara and surrounding communities. Winter rains, and occasional snows, drop the moisture on these lands which finds its way into a system of reservoirs and is stored for later use.

By two o'clock, it was hot. It was just about then that someone's careless act touched off the inferno which later became known as the Coyote Fire.



Santa Barbara News-Press photo

It involved areas protected by the fire departments of Montecito, the City of Santa Barbara, Santa Barbara County, and the Los Padres National Forest. Within the next few hours, it required the cooperation of fire departments from Los Angeles, Ventura, and Kern Counties, the Office of Civil Defense, military organizations, and neighboring fire districts. Also working closely with the Forest Service were the California Division of Forestry, State and county law enforcement agencies, private companies and individuals, prison institutions, the Red Cross and countless others. We are proud of and thankful for this cooperation displayed by government agencies as well as private industry.

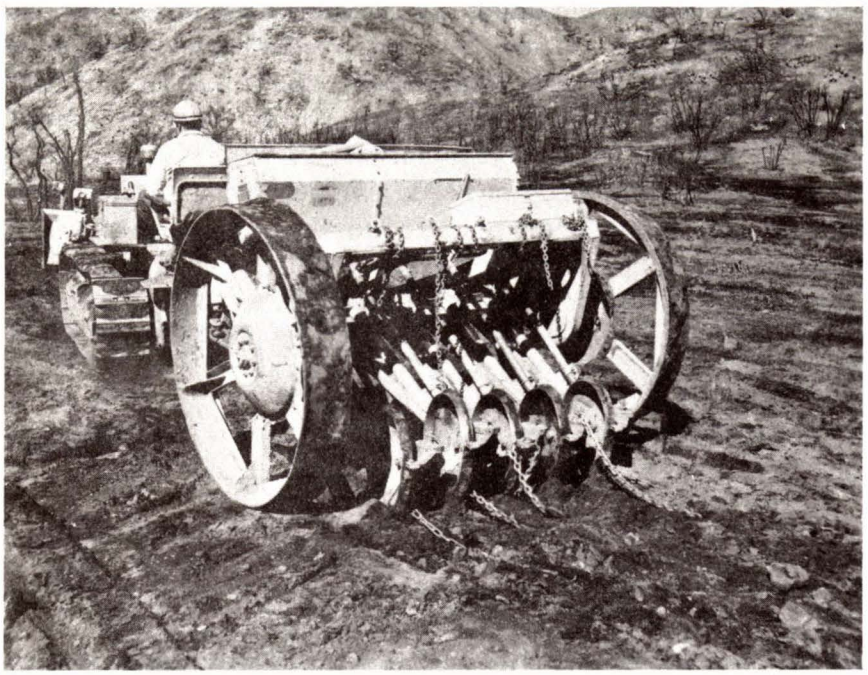
When the fire was finally extinguished on October 1st, some 67,000 acres had been burned over – about 46,000 of this was National Forest. Of the 160 miles of fire line used to control this fire, 20 miles had been prepared prior to the fire. (With prepared fuelbreaks from which to work, where the natural vegetation has been replaced with less hazardous fuels, air tankers and the small helitack crews can be very effective.)

The valuable Santa Ynez Watershed was bared of the vegetation which had held the soil in place on the steeper slopes. A heavy rain on these lands could wash mud and silt into the Cachuma, Gibraltar, and Juncal Reservoirs, cutting their capacities by filling them with debris and polluting them with muddy water. Mud slides would threaten homes, as well as other buildings and improvements which escaped the fire.

Immediate action had to be taken, and plans for rehabilitation were underway before the fire was completely out. Funds for seeding the denuded slopes were made available through local, State, and Federal cooperation and rapid Congressional action. Arrangements were made for the Forest Service to seed 21,000 acres of privately-owned burned lands as well as 46,000 acres of National Forest land. Fifty-four hundred pounds of seed, shipped from Forest Service seed banks, enabled aerial seeding operations to start. Approximately 593,000 pounds of seed were sown by three airplanes and two helicopters. Close cooperation by the seed industry and the California Department of Agriculture in processing, delivery, and inspection expedited the job tremendously. Seeding started on September 30 and was completed on October 16.

For the first time a program of fuelbreak construction took advantage of many acres "cleared" of brush by the fire. Under this program, about 2,500 acres of burned-over National Forest land (sites of good soil and moderate slopes, and selected ridge tops) were seeded in strips 200 to 500 feet wide to convert these areas to permanent fuelbreaks.

Fortunately, only a gentle rain followed the emergency seeding, and the grass became established before the heavier winter storms. The establishment of annual grasses reduced erosion materially but at best can be only a partial substitute for permanent plant cover.



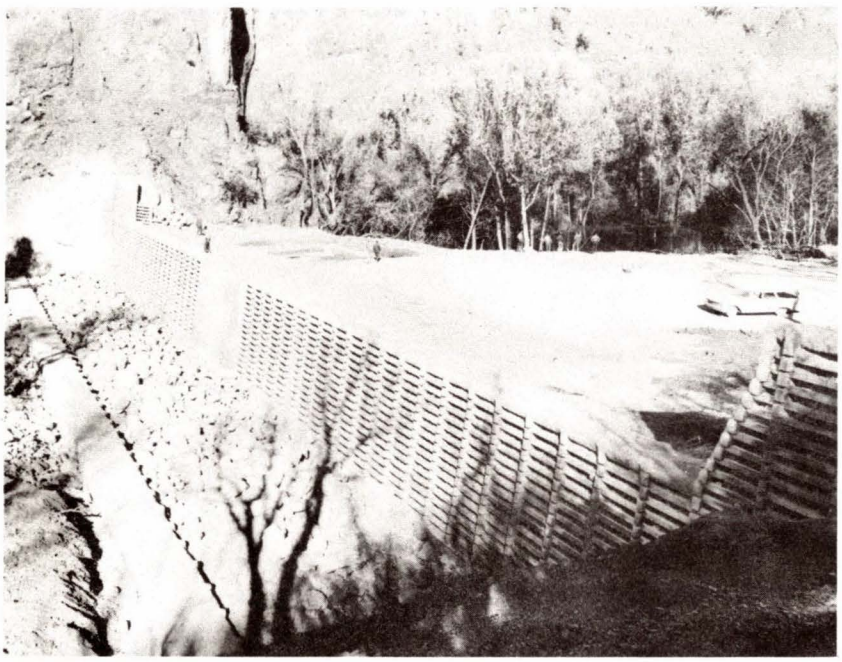
Seeding was also done with rangeland drills.

In addition to seeding, other protective measures were needed. Road drainage had to be greatly modified to handle the expected increased surface runoff. Water drainage structures, including 327 road drainage dips, rip rap, and over 8,000 feet of flumes were installed.

A berm outlet installed on Pendola Road

Upstream projects, while reducing and minimizing soil loss and debris movement, do not provide full protection. Therefore to further protect Gibraltar Reservoir, three debris dams were constructed above the reservoir. Emergency appropriations of $540,000 were made available by October 10, including a $75,000 contribution from the City of Santa Barbara. On October 11, experienced engineering crews and equipment from the Angeles National Forest were on the job.

By October 14, excavation had started for these projects. By December 11, the three debris dams were completed. Their total storage capacity of 3.7 million cubic yards was a final barrier against debris and siltation of Santa Barbara's threatened water supply.



Santa Ynez Dam is 332 feet long and 31 feet high. It is composed of 6,600 interlocking crib members, 5,500 tons of rock and gravel, and 1,000 cubic yards of concrete.

While everything humanly possible, with present knowledge and resources, has been done to rehabilitate the area, much damage has occurred and more will occur. The rehabilitation is only emergency work. It cannot magically restore the stable watershed conditions which prevailed before the fire.

With adequate access and fuelbreaks the fire undoubtedly could have been controlled earlier. Firemen could have saved many of the buildings which were lost if they had had better access, and the buildings had been constructed with better clearance around them. This catastrophe was caused by someone's carelessness with fire. It could reoccur elsewhere at any time during California's long, dry summers. Fire prevention, land treatment, an enlighted public, and fast and efficient fire-fighting forces are the only answer to making major forest fires a thing of the past.

The floods which struck northern California at Christmas time caused an estimated 30 million dollars damage to National Forest improvements. Most of the damage was to roads and trails. Roads leading to 155 National Forest timber sales were damaged affecting 72 mills which employ 11,000 workers.

Typical of widespread damage – State Route 36 at Forest boundary

We work now to repair the flood damage in northern California's National Forests so that timber can be harvested on schedule, so fire control forces will have necessary access, and so summer visitors can reach the recreation areas.

While the forest fires and floods created a terrific impact on the National Forest work program, they occupied a relatively short period of time, and most of the regular work was accomplished which had been planned and financed for this year. The following are highlights of these accomplishments:

* Soil surveys covered some 324,000 acres to provide guidance for forest fuel modification, tree planting, erosion control, road construction, and other management activities.

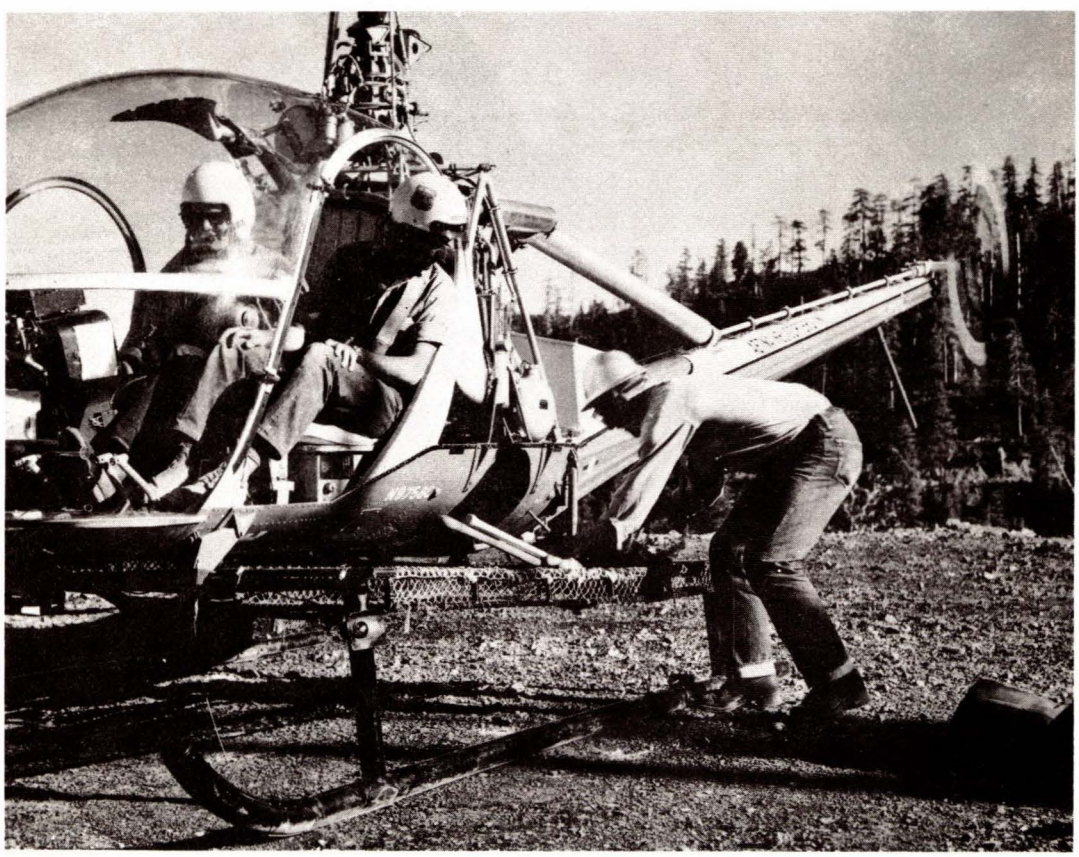
* Range revegetation covered 11,500 acres.

* Wildlife habitat was improved on 1,970 acres.

* Hazardous fuel was reduced on 14,200 acres.

* 30 miles of firebreaks were constructed.

* Training smokejumper and helitack crews was increased; helitack crews fought a total of 601 fires representing 36 percent of the total.



* Recreation visits to the National Forests in California increased 11 percent over 1963, and set a new record of 19,275,000.

* Visitor days reached a new high of 25,400,000.

* Winter sports activities increased 35 percent to 1,981,400 visitor days.

* Camping was the most popular activity and accounted for 7,211,000 visitor days.

* Thirteen National Forest Wildernesses were included in the new National Wilderness System created by the 1964 Wilderness Act (Public Law 88-577).

* The High Sierra Primitive Area was reclassified, renamed the John Muir Wilderness, and increased 122,000 acres to a total of 502,978 acres.

* The South Warner Wild Area on Modoc National Forest was reclassified to the South Warner Wilderness with a total of 68,507 acres.

* Eighteen land exchanges were consummated, and 11,764 acres of National Forest land was traded for 15,198 acres of privately-owned land.

* Trees were planted on 20,489 acres.

* Timber stands on 21,658 acres were improved.

* 2.4 billion board feet of timber were sold in 1964, and 1.9 billion board feet were harvested.

* Insect control projects included 464,000 acres, and disease control covered some 24,000 acres.

* The Forest Service constructed 71 miles of roads.

* Timber purchasers constructed roads totaling 690 miles.

* All purpose trails constructed totaled 46 miles.

Ever increasing pressures brought on the National Forests in California by a growing population, and the role these public lands now occupy in the economic structure of the State and county, make it imperative that the National Forests continue normal business in spite of the impacts of fire and flood.

Chas. A. Connaughton

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